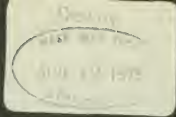




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THE LEADER AND HIS GROUP:
SITUATIONS OF ADJUSTMENT

by
Ralph Katz

October 1974

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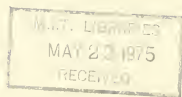
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INTRODUCTION

In the area of group dynamics, more attention has been focused on the nature of leadership than on almost any other facet. It has long been recognized that the leader is a critical factor in group performance. A plethora of advice is continually being offered on how to be a 'good' leader. From Machiavelli's (1947) The Prince to the more modern views of McGregor's (1960) theory X and theory Y and Blake and Mouton's (1964) The Managerial Grid, advice on managerial leadership has been expounded. However, despite this vast and continuous research effort, behavioral scientists are still unable to formulate a generally comprehensive and acceptable theory of leadership. In fact, there are only a few well-established concepts concerning this area.

Most of the current empirical investigations concerning leadership have focused on comparing two separate types of leadership styles. This dichotomy of leadership style has been termed expressive versus instrumental by Bales (1955), consideration versus initiating-structure by Halpin and Winer (1957), and high LPC-type leaders versus low LPC-type leaders by Fiedler (1967). In general, the first term from each of the dichotomies connotes a warm, friendly, and understanding leader who is concerned with interpersonal relations. The second term connotes a leadership style that is task-oriented. There are essentially two fundamental questions concerning leadership style that have motivated most of the empirical research. The first issue concerns whether or not a single individual can simultaneously be considered a highly expressive and a highly instrumental leader, using Bales' terminology. The second problem area involves a comparison of the two leadership styles to determine the circumstances under which one style is 'better' than the other, i.e., which style facilitates higher performance, higher satisfaction, more innovation, etc. The research reported in this paper focuses primarily on this latter type of problem.

SITUATIONAL APPROACH

Recent research emphasis has shifted away from identifying the common qualities of leaders to identifying the common functions of leaders. In particular, behavioral scientists are concerned with those functions that seem to emerge or are most effective for certain situations. This 'situational' approach stresses the need to relate the various leadership activities with various kinds of groups and their task situations.

Specific leadership functions are important for overcoming certain types of

task-environmental and interpersonal problems. The relevancy of any particular leadership activity, however, is dependent upon the particular problems that a group faces. The individual who appears to possess the most suitable combination of skills for satisfying the needs of the various group members should emerge as the leader. He becomes the leader not because he is intelligent but because intelligence is necessary for fulfilling the group's demands and expectations. Accordingly, leadership is not merely something that resides within an individual and operates independently of the surroundings, but it is behavior that is influenced by the conditions that are present. The assumption of a leadership role by an individual is dependent upon the nature of the social and task situations in interaction with the personality of that individual. What is needed therefore, is a systematic representation of the leadership functions demanded by various social and task situations.

Given a relationship between leadership and situational characteristics, it is clear that as the situation changes the actions required of the leadership role might also change. Accordingly, as the conditions change, groups must be able to elicit the appropriate leadership functions from its members. Those leaders who can recognize changing conditions and are able to meet any new leadership requirements will be best suited for retaining their positions. If the leader does not continue to meet the demands and needs of the group, he will most likely be replaced by someone who can. The distribution of leadership over time, therefore, is dependent upon the stability of the group and the adaptability of the members. Thus, leadership is not necessarily a lasting role, for a leader can often become ineffective or unqualified as the situation changes.

THE LEADER AND HIS GROUP

None of the studies pertaining to leadership style to date has focused on, or even considered, an extremely important aspect of a group situation, namely, the interrelationships among the members themselves. Although the dependency of leadership style on the nature of the group has been recognized, this relationship has not been investigated. Gibb (1947) states:

The choice of a specific individual for the leadership role will be more dependent upon the nature of the group and of its purpose than upon the personality of the individual.

Hemphill (1955) adds emphasis to this point when he writes:

There are no absolute leaders, since successful leadership must always take into account the specific requirements imposed by the nature of the group which is led.

During its existence, every group must contend with its own task and socio-emotional problems. Interpersonal conflicts that result from the internal relations of particular group members create social and psychological needs that must be satisfied. The demands and pressures imposed on the group by its environmental relations can also lead to interindividual conflicts that are task-related. It should not be surprising that this typology of conflict parallels the two dimensions of leadership style. As Evan (1965) points out, an expressive leader is one who is primarily concerned with interpersonal conflicts while the instrumental leader devotes his energies towards solving the task problems. The nature of the group, therefore, is most appropriately described by the interpersonal and task-related interrelationships for establishing the dependency between leadership style and the actual group.

All groups are different, and the leadership functions required for a particular group achieving its desired state are more than likely different from those of another group. According to Bavelas (1960):

That person who can assist or facilitate the group most in reaching a satisfactory state is most likely to be regarded as the leader.

In striving to achieve its desired end, each group encounters its own task and emotional problems, but the relative importance of solving each of these two problem areas differs from group to group. It might be more essential for the group to weigh the solving of its emotional problems more than that of solving its task problems, or the converse could be the case. In either situation, the individual who possesses the leadership style which best matches the needs of the group at a particular time will most likely emerge as the group leader: instrumental leaders for groups whose task problems heavily outweigh its emotional problems and expressive leaders for the reverse conditions. Many studies such as Crockett's (1955) have even shown that if the designated leader fails to provide adequate leadership or meet the group's expectations, informal or new formal leaders will emerge to fill these gaps.

The predictor variables for Fiedler's model (1967) are concerned with the relationships between an already existing formal leader and the group but are not concerned with the interrelationships among the group members themselves. This omission is primarily caused by Fiedler's concentration on the needs of the leader and not the needs of the group. He states that certain conditions allow a leader to gratify his own needs better than other types of conditions, thereby creating a more favorable situation that permits the leader to have greater influence. Although he does admit that leadership effectiveness depends just as much on the

group situation as it does on the leader, Fiedler never utilizes the inter-relationships of the group members in developing his contingency theory. Moreover, he measures the leadership style of the group from the questionnaire responses of the formal leader and not from the group members. The problem of whether the LPC scores of the formal leaders actually correspond with the leadership style perceived by the group members is not even considered. Part of the difficulty in studying the leadership process is that it is an interpersonal process involving the reciprocity of perceptions and not just the perceptions of the leader himself.

Accordingly, it is essential that any comprehensive contingency theory of leadership incorporate the relationship between the two dimensions of leadership style and the nature of the group as described by the interpersonal and task-related interrelationships that generate particular expectations of a leader. The various conflicts that arise from these interrelationships create tensions, stress, and social-emotional needs for particular group members. These individuals are in a continual struggle to relieve these tensions. It seems reasonable to conclude that a leadership style would be more appropriate according to the extent that it could help satisfy or reduce these needs and tensions.

GROUP EQUILIBRIUM

In order to investigate the impact of a group upon the leadership process, there must be a methodology which can clearly and meaningfully describe the various tensions that arise during the group-member interactions. A viable approach is to depict the actual process of interaction by comparing it with some hypothetical system that is assumed to be in equilibrium. If absolutely no new elements are introduced into the system, then the interaction process should remain unchanged in rate and direction. Such a process is obviously a limiting condition, for new elements are always entering the system. Group members are constantly altering their perceptions and cognitions of the task-situation because of the interactions among themselves and with the external environment. Moreover, decisions and value-judgements are being made and emotional reactions are occurring throughout the task process.

The introduction of new elements into the system can create disturbances and shift the process away from its equilibrium state. These disturbances create 'states of tension' which in turn motivate the system to readjust in order to regain its equilibrium. The directions of adjustment, *ceteris paribus*, must always

lead to a reduction in the tension state. The system's reaction to its equilibrium shift, however, can result in the establishment of a different equilibrium state. With the existence of disequilibrium or states of tension, it seems reasonable that the group would seek out that person whose leadership style would most facilitate a reduction in the tension. Socio-emotional tensions or task-related disturbances should respectively elicit an expressive or an instrumental leadership style. As different kinds of tensions arise during the task process, different kinds of leaders may be desired by the group.

BALANCE THEORY

The concept of balance, first developed by Heider (1958) and later mathematically formalized and generalized by Cartwright and Harary (1965), provides a theoretical model of the equilibrium state of a group's interrelationships. In fact, homeostasis is the central concept of balance theory. Heider presents his principle of balance by describing the sentiments that a person, p , feels towards another person, q , or some impersonal entity, x . Sentiments refer to the way a person feels about or evaluates something or somebody and can be roughly classified as either positive or negative. A positive sentiment between p and q , written as pLq , can indicate that p likes, loves, values, or admires q ; whereas a negative sentiment, written as $pDLq$, signifies that p dislikes, disapproves, hates, or rejects q .

In addition to these sentiment relations, Heider defined positive unit-forming relations, written as pUx , and negative unit-forming relations, written as $p-Ux$. The relation pUx can mean that p made, controls, or owns x while $p-Ux$ indicates that they are somehow segregated. The unit relation pUq can imply that p either lives with, is similar to, or works well with person q . The sentiment and unit-forming relations are an interdependent system, and Heider assumes that the preferred state is one in which the relations exist harmoniously, i.e., exist in a balanced state. Such a balanced or equilibrium state is a situation in which the perceived units and sentiments fit together without stress; thus, there is no pressure to alter either the sentiments or the cognitive organization.

Using Gestalt psychology as a basic premise, Heider assumed that people tend to prefer to organize their perceptions in a consistent and comfortable manner. The relationships within the group must 'add up' or 'fit together'. The basic proposition is that balanced relationships are the equilibrium and preferred states. If a system is disturbed and becomes unbalanced, then pressures will develop to add, modify, or delete relationships until a balanced system is attained. Tension and psychological discomfort will be produced as long as a system remains unbalanced

either because change is not possible or the change is still in process. It is this tension, however, which is the intervening variable -- the motivating mechanism -- for trying to restore or maintain balanced states.

Because the degree of imbalance ¹ is a measure of the shift away from a theoretical equilibrium, it can be related linearly or simply monotonically to tension. The basic paradigm is that imbalance or inconsistency² is unpleasant which creates tension and stress, thereby motivating the individuals to re-structure their system of relationships towards balance or consistency. Thus, balance theory can actually be regarded as a theory of tension measurement and perhaps tension management! It is this linkage between imbalance and tension, however, that provides the primary rationale for using imbalance as a predictor of the differences in leadership style.

LEADERSHIP PROCESS MODEL

The interrelationships that have been discussed in the previous sections as being relevant for explaining differences in leadership style are the interpersonal and task-oriented relations. By applying the imbalance measure only to the sentiment relations between the individuals of a group (e.g., pLq, qLr, rDLp), the degree of affective imbalance can be computed as a measure of affective disequilibrium. Similarly, it is also possible to measure the degree of imbalance in the unit-forming relations. As previously mentioned, pUq can imply that p works well with q while p-Uq means that p does not work well with q. Thus, this task imbalance can be used as a measure of task disequilibrium.

Accordingly affective imbalance describes the interpersonal tensions while task imbalance measures the tensions that are arising from task performance. It seems reasonable to conclude that expressive leaders would be most suitable for modifying the group under conditions of affective disequilibrium and instrumental leaders for situations of task disequilibrium. In light of these expectations, Katz (1973) has proposed (and to some extent tested empirically) a model of the leadership process illustrated in Figure 1. [Figure 1 about here]

Based on the model's implications, Katz (1973) maintains and has partially demonstrated that satisfaction-type measures are positively related to the leadership style changes demanded by the conditions of high or increasing disequilibrium. The implications of the model in terms of effectiveness are not as clear. As a result, a laboratory experiment was devised and executed to examine the relationships between leadership style, affective disequilibrium³, and effectiveness in a controlled context.

In designing the experiment and its treatments, there were several essential criteria that had to be satisfied. All of the replications within the different treatment categories had to be comprised of small groups (in this case triads) - all engaged in the performance of the same assigned task(s). In addition, one of these three individuals would have to be a formally designated leader.

It was also imperative that there be substantial group interaction during the course of the experiment. The assigned experimental task(s) must require considerable interaction among the leader and the other two participants in order to permit the subjects to develop clear perceptions of the leadership style and interpersonal relationships. The task(s) must also be designed to yield objective measures of performance. Lastly, the experiment must be conducted in as realistic a setting as possible. In order for the concepts of leadership and affective disequilibrium to be meaningful, it is essential that the subjects seriously think and cogitate about their situation. They must be prevented from behaving or feeling as though they are merely in an experimental situation that will soon end. Furthermore, a post-experimental questionnaire must be administered to the subjects to determine the effectiveness of the assigned treatments. Thus, the objective is to design a realistic task environment which also permits one to administer the questionnaire in the context of the experimental situation. This would help circumvent some of the problems concerning experimenter effects and response bias that usually surround the administration of post-experimental questionnaires.

EXPERIMENTAL DESIGN

The design of the laboratory experiment revolved around two leadership and two disequilibrium treatments. The first leadership treatment consisted of groups containing only expressive-type leaders while the second treatment was composed of groups with only instrumental-type leaders. For the disequilibrium classification, one of the treatments included only balanced groups while the other treatment was comprised of only imbalanced groups. Table 1 illustrates this two-way analysis of variance design. [Table 1 about here]

Depending upon the particular leadership treatment being implemented, the triad's formally designated leader had to demonstrate either an instrumental or an expressive style of leadership. To accomplish this, the person placed in charge of the group was not a naive subject but an experimental confederate who was aware of the experimental situation and completely instructed regarding his activities and behaviors. (This individual, in effect, role-played either an expressive or

instrumental leader in every triad throughout the experiment). The behavioral differences that were used to separate the two dimensions of leadership will be explained during the discussion of the task procedures.

For the triads assigned to the balanced treatment, all of the interpersonal relationships had to be positive. As will be shown in the next section, there was always sufficient interaction among all three individuals to establish these interrelationships. For the imbalanced situations, the triads were manipulated to produce a negative interpersonal relationship between the two participants neither of whom was the leader. The other two relationships were designed to remain positive. The method utilized to produce this negative interrelationship is discussed in the next section. Because a great deal of control was needed to accomplish this treatment in a realistic setting, one of these two participants was also a confederate of the experimenter. As with the leadership role, the identical individual was the confederate for every experimental group.⁴ Figure 2 illustrates the balanced and imbalanced triads.⁵ [Figure 2 about here]

EXPERIMENTAL PROCEDURES

Because the treatments were behaviorally induced, the procedures for creating the appropriate perceptions must be explained in some detail. Subjects were recruited through an advertisement placed in the university's daily newspaper. The ad stated that students were needed for several hours⁶ to help code some questionnaire from a survey project. For the two days during which the ad appeared, a surrogate secretary received the phone calls from the interested students. She informed them that the questionnaires would be received from the field starting the next week, and if they left their names, phone numbers, and a schedule of their free time, she would call them when their assistance was needed.⁷ Only the male undergraduate students were called to participate in the 'experiment'. Each subject was asked by the 'secretary' to report to a particular room where he would find the appropriate individuals (the confederate and the leader) who were concerned with the coding tasks for the crime survey project.

Upon entering the room, the subject found the leader discussing certain aspects of the project with the confederate. The leader interrupted his conversation, greeted the subject, and introduced both himself and the confederate. If the subject was assigned to an expressive treatment, the leader thanked the subject for coming and told him that his help would be greatly appreciated. In contrast, the instrumental leader emphasized that there was a great deal of work that had to be done in a short amount of time.

The leader then proceeded to explain to the subject that they were working on a pilot study for the National Crime Survey Project and that several 'batches' of questionnaires had just been received from the field. The subject's help was needed to transfer the answers from the questionnaires to code sheets, thereby facilitating faster and more accurate keypunching.

Before commencing with the coding task, however, the subject was asked to proofread a xerox copy of several typed pages that were going to be used in the project's report as an introductory section on crime. The expressive leader stated that he would greatly appreciate the subject's circling any actual or even suspected typing errors. The same instructions were given to the subject by the instrumental leader but without the acknowledged appreciation. Instead, the instrumental leader told the subject to circle all of the mistakes he could find, but not to spend too much time on it as there were many other tasks to be completed.

While the subject performed the proofreading task, the leader continued his conversation with the confederate knowing that the subject would completely overhear what was being said. For the expressive condition, the leader congenially planned the analysis of the data with the confederate. They briefly discussed possible frequency and cross-tabulation tables and how the information would be used. On the other hand, the instrumental leader told the confederate that he had to prepare a complete list of all the tables that were going to be run on the data. In addition, some preliminary results had to be available for the instrumental leader to present at the project's staff meeting the following afternoon. Expressing grave concern over meeting these deadlines, the instrumental leader suggested that both he and the confederate work that evening and the following evening.

Regardless of the leadership treatment, it was essential for the subject to perceive that the personal relationship between the leader and the confederate was positive. To accomplish this, the confederate suggested, during their conversation, that he drive the leader home both nights. He also inquired about the leader's new baby and expressed his amazement at how much the baby had grown in the past month. The leader, in turn, invited the confederate and his wife to dinner on Saturday night to be followed by a movie. They discussed this idea as if their getting together was a very common occurrence. Moreover, their conversation implied that their wives were very friendly and in constant contact.

All of this interaction between the leader and the confederate occurred while the subject was proofreading. When the subject indicated that he had finished this task, the expressive leader looked over indicated errors and warmly thanked the subject for his assistance. Furthermore, he expressed his appreciation for any word

or phrase changes that were suggested. The instrumental leader, however, was very perturbed over the number of typing errors. He further complained that it was very difficult to get the secretaries to do the typing quickly and accurately.

Although the number of typing errors detected by the subject was recorded, this measure was not used as a dependent performance score because the treatments were still being induced. The proofreading job primarily served as a dummy task during which the subject's perceptions of the situation were being shaped.

Following the proofreading, the subject was asked by the leader to help him complete a cluster-matching task. The respondents from 'batch one' of the questionnaires had been clustered into three groups on the basis of their answers to the crime questions. Two different clustering techniques, the Johnson and Howard-Harris, had been separately used to construct this grouping. The objective was to determine whether the composition of the three clusters from the Johnson algorithm closely matched the compositions from the Howard-Harris algorithm. Accordingly, the subject was handed a sheet of paper with the four-digit respondent numbers that comprised each of the three clusters from the Johnson analysis while the leader possessed a similar sheet with the Howard-Harris clusters. As the leader read a respondent number from his lists, the subject scanned through the Johnson clusters and informed the leader of the respondent's assigned cluster. There was very little association between the cluster assignments of the two techniques. The sole purpose of this task was to create additional interaction between the leader and the subject in order to help solidify a positive interpersonal relationship between them.

Only when the cluster-matching task was finished did the subject start to transfer answers from the crime survey questionnaires to code sheets. The confederate informed the leader that there were still a few questionnaires from 'batch three' that had to be coded. Accordingly, the leader gave these ten questionnaires to the subject with specific coding instructions. For each questionnaire, the subject was to record on a single line the four-digit respondent number, followed by the appropriate codes for the answers to the fifteen attitude statements, followed by the three codes indicating the respondent's demographic characteristics. If a question was not completed or if he could not interpret the answer, the subject was to use a 'zero' code to indicate the response.

A copy of the completed questionnaire is included in the appendix. Note that there are no grid lines separating any of the attitude answers. The questionnaire was purposely designed in this manner to make the coding task non-trivial. All of

the questionnaires used in the experiment were completed by the experimenter. The responses were marked at the exact intersection of a question and one of the various answer columns. Only a few errors were built into the set of questionnaires and these consisted of having either two answers or no answer for a particular question.

While the subject coded the ten questionnaires, the expressive leader pleasantly informed the confederate that there was a considerable difference between the clusters generated from the two grouping routines. He further recommended that they should consider using the clusters from both techniques to analyze the data followed by a comparison of the final results. The expressive leader then returned to the subject asking him if he had any questions or problems with the coding task and making sure that the job was being executed properly. Contrastingly, the instrumental leader warned the confederate that the two clustering techniques were generating very different respondent groupings. Therefore, they would have to use both routines to analyze the data which meant they would have to do a great deal more work than had been anticipated. The instrumental leader also returned to the subject but only to ask how many questionnaires had been coded and to make sure the coding was being done properly.

The purpose of this brief coding task was to further acclimate the subject to the situation and its treatment conditions. It was also used to acquaint the subject with the questionnaire and the task of coding. This would help suppress the effects of learning on any future coding tasks. As before, the number of coding errors made by the subject could not be used as a criterion measure because the treatments were still being induced.

When the subject completed this coding task, he was informed that the leader had to pick up some computer output from across the street that listed the codes that had already been keypunched for the questionnaires in 'batch two'. While he was gone, the leader asked the subject to complete a blank questionnaire putting a 'C' in the column where he thought most of the college students would have answered the question and a 'p' where he thought most of the parents would have answered the question. If the leader was not back before he had completed the questionnaire, the subject was told to give it to the confederate to look over. The leader then departed from the room with the intention of not returning until the subject had completed the questionnaire and handed it to the confederate.

Up to now there had not been any interaction between the confederate and the subject. If the subject had been assigned to a balanced treatment, then the confederate started a friendly conversation with the subject about the various crime



and legal issues contained in the questionnaire. The confederate basically agreed with and supported the opinions of the subject. For the conditions of imbalance, however, the confederate reacted with considerable hostility towards the subject. Looking over the completed questionnaire, the confederate antagonistically disagreed with the opinions of the subject and started to attack him personally, e.g., "I should have known by your clothes (or long hair) that you would have opinions like this" or "It really frightens me that there are people like you around". The confederate also looked for particular inconsistencies in the answers of the subject to use in his personal attacks.

When the expressive leader returned to the room for the balanced triads, he simply participated in the last few minutes of the discussion and thanked the subject for completing the questionnaire. Under conditions of imbalance, the expressive leader did not venture his own opinions but told the confederate that not everyone agreed with his ideas and that he would have to learn to be tolerant of other people's opinions. He concluded by thanking the subject for completing the questionnaire. Upon entering the room, the instrumental leader abruptly stopped the discussion, regardless of the disequilibrium treatment, declaring that there was still a great deal of work that had to be finished.

All of the treatment conditions for the subject have now been implemented and the rest of the experiment consisted of two tasks from which the objective performance measures were obtained. In the first task, the confederate and the subject worked together to proof the codes that were keypunched against the responses in the questionnaires of 'batch two'. The confederate read the codes from the computer listing while the subject scanned down the questionnaires to make sure the codes were correct. The computer listing contained a built-in error rate of slightly less than two percent. The number of errors detected by the subject in this cross-checking task served as one of the criterion performance measures. After this cross-checking task, the subject was given sixty questionnaires from 'batch four' to code in exactly the same manner as he had coded the ten questionnaires from 'batch three'. The number of coding errors the subject made in this task served as a second criterion performance measure.

At a pre-arranged time that coincided with the latter part of the last coding task, a departmental secretary entered the room to administer a post-experimental questionnaire in the context of the experiment. Both the leader and the confederate had previously left the room on the pretense of having to examine another room where key-punch machines would be installed for the project's

future use. The rationale for asking the subject to complete the questionnaire was that the employees of the National Crime Survey Project were going to be re-assigned to a number of small working groups. To do this successfully, the project's administrator desired the subject's honest impressions of the people with whom he had been working. The subject answered three questions on a Likert-type scale concerning his perceptions of the interpersonal relationships between himself and the leader, between himself and the confederate, and between the leader and the confederate. He also completed six questions on a Likert-type scale concerning his perceptions of the group leader. Three of the questions pertained to expressive leadership while the other three dealt with instrumental leadership.

With the completion of the coding of the sixty questionnaires, the experimental tasks were finished, and the subject was paid and debriefed.⁸ Figure 3 summarizes the experimental tasks and their expected duration. [Figure 3 about here]

EXPERIMENTAL RESULTS

The data from the post-experimental questionnaire were first analyzed to determine if the leadership treatments were effective. The answers to the three Likert-type expressive and instrumental leadership statements were separately aggregated for each subject. His summed instrumental score was subsequently subtracted from his corresponding expressive score to yield an overall measure for the leadership treatment. These measures were submitted to a two-group discriminant program. Except for one subject all of the discriminant function scores for the expressive treatment were greater than those for the instrumental treatment. The data for this subject, therefore, was excluded from the analyses of the performance measures.

The subjects' responses to the interpersonal relationship between themselves and the confederate were also submitted to a two-group discriminant program. For this set of disequilibrium treatments, two of the subjects had to be eliminated from the remainder of the experimental analysis.⁹ In addition, all of the scores describing the relationships between the twenty remaining imbalanced subjects and the confederate were less than all of the scores describing the other two interpersonal relationships. Thus, the four treatments were verified for all but a total of three subjects.

The results for performance measures from the coding task are presented first. The mean numbers of coding errors for the different combination of treatments to-

gether with the analysis of variance table are presented in Table 2. [Table 2 about here].

There are no significant main effect terms in the analysis of variance table, i.e., there are no significant differences in performance between the balanced and imbalanced treatments and between the expressive and instrumental leadership treatments. However, there is a highly significant interaction effect between leadership and disequilibrium. Under conditions of affective imbalance, the subjects with instrumental leaders performed best while under conditions of balance, the converse was true. This result is in agreement with a number of researchers, e.g. Bass (1960), Carp (1961), Torrance (1954), and Fiedler (1967), who have asserted that groups experiencing tension and pressures from external sources appear to perform better under task-oriented leaders who structure the situation.

Table 3 presents the mean number of errors detected in the cross-checking task for the various combinations of experimental treatments in conjunction with the analysis of variance table. Not only are the main effects insignificant but the interaction effect is also insignificant. [Table 3 about here]

Are there any differences between the coding and cross-checking tasks that can account for these contradictory results? The cross-checking job is an interindividual or conjunctive type of task. The subject, therefore, could have reacted to the stress of his imbalanced state in two ways. He could become more involved in the task¹⁰, or he could withdraw from the task and simply let the confederate read the codes. The debriefing session revealed that both of these reactions occurred. Some subjects exclaimed that they were determined to discover every single error while others stated that they really didn't concentrate too hard during the cross-checking task. Unfortunately, no record or measure was kept of the subject's reaction since its relevance was not anticipated.

In contrast, the coding task is an individualistic or disjunctive type of task. Since he must complete the task, the subject does not have the option of withdrawing but can react by getting more involved in the task, a reaction which is facilitated by an instrumental leader. Thus, the distinction between conjunctive and disjunctive types of tasks may be an important factor in developing a better understanding of the leadership process.

CONCLUSIONS AND IMPLICATIONS

The most striking result emerging from this laboratory experiment lies in the absence of significant results for the main treatments of both leadership style and affective equilibrium. In total, those subjects who were assigned to the expressive leader neither outperformed nor performed less well than their counterparts who worked under an instrumental leader. This finding conforms to the overall conclusions deduced from the myriad of leadership studies. It is simply that neither leadership dimension can deliver greater group or individual effectiveness than the other dimension - in all cases. Rather the effectiveness of any particular leadership style is contingent upon the particular situation; hence, the need for contingency theories.

In similar fashion, the level of performance did not significantly deteriorate under conditions of internal stress. The mean performance scores from all of the affective disequilibrium situations was almost as good as the mean performance score from all of the conditions of affective equilibrium. This result supports the proposition of Fiedler (1967) and others that the stressfulness of the situation per se does not lead to lesser performance. As before, one has to consider the particular contingencies operating in the environment of interest.

What does emerge from the experiment - at least for the disjunctive task - is the powerful influence of interpersonal relationships upon the effectiveness of the different leadership dimensions. Under conditions of affective disequilibrium, subjects in the instrumental leadership treatment outperformed by a wide margin the subjects assigned to an expressive leader. The reverse ordering, however, was true for conditions of affective equilibrium. Furthermore, performance deteriorated with the introduction of stress only with expressive leadership while it actually improved for those subjects with instrumental leaders.¹¹

We are now confronted by a serious dilemma. The leadership process model maintains that group members prefer (and satisfaction will increase with) more expressive and less instrumental leadership as affective disequilibrium increases. On the other hand, instrumental leadership is likely to be more effective than expressive leadership for conditions of affective disequilibrium. Thus, it appears that there can be a definite trade off between high satisfaction and high performance. Organizational psychologists originally envisioned that satisfaction and performance measures would always be positively correlated; how-

ever, this hypothesis has not been empirically supported. In fact, we have just put forth conditions in which the performance and satisfaction criteria may be negatively related.

The manager (or group leader) caught in such a situation of affective disequilibrium might be faced with conflicting demands. From the subordinates point of view, more expressive and less instrumental leadership is needed to reconcile the interpersonal problems and issues that have or are appearing. In contrast, the manager being pressured for higher and better performance figures by his superior (s) resorts to more instrumental and less expressive leadership, and this strategy seems to work despite the dissatisfaction that ensues. What actually happens, i.e., what actual changes in leadership or leadership style that occur in an organization, is probably a function of the distribution of power with the more powerful groups being more likely to change the leadership to suit their needs.

If leaders are faced with conflicting demands under disequilibrium conditions, then is there anything that can be done to help resolve this apparent impasse? One possibility might consist of designing groups with dual leaders (one for each of the dimensions) or designing groups with more flexible and less structural leadership roles - recognizing and using the fact that all group members can potentially influence the group. In any case, it would appear that we should shift our attention from studying only the individual leader or manager and focus more on groups, their compositions and their distribution of roles. This is especially important in light of the recent trends towards more group and team activities within organizations and at all levels within organizations. (Job enrichment or redesign programs, for example, usually involve the creation of autonomous work groups).

If we are to increase our understanding of the issues and relationships that we have been discussing, then there are several important problems that need immediate attention. First, it is quite possible that effectiveness increases with instrumental leadership under conditions of affective disequilibrium only in the short run, after which effectiveness would start to degenerate. The laboratory experiment only collected performance data for a very short period of time. Had each subject been obligated to perform the tasks over a much longer time horizon, it is conceivable that a change in results could have occurred.

Over time, the performances of the imbalanced subjects with expressive leadership might have become greater than the performances of the imbalanced subjects with instrumental leadership. Furthermore, the absenteeism and departure rates for imbalanced subjects with instrumental leadership might have increased a great deal more than for the

imbalanced subjects with expressive leadership. The possibility of finding different results over short and long time periods must be investigated.

Substantial comparative research on different models and measures of equilibrium is needed in order to ascertain the appropriateness of each. Heider's balance theory is a 'multiplicative' model formulated only for groups consisting of two and three members. He never tried to apply his theory to larger groups; perhaps, because he felt that his balance principles would not be valid for them. Cartwright and Harary, nevertheless, have mathematically extended the theory to larger groups without any empirical validation. Other researchers advocate their own variations of equilibrium models. McGuire (1966), for example, maintains that an 'additive' imbalance model is more valid than Heider's 'multiplicative' model. The implication is that the perceived tension is more a function of the frequency of negative relations than upon their arrangement. Intuitively, the principle would change from "I must be the friend of my enemy's enemy" to "How many enemies are there?" It is even possible that additive imbalance is most appropriate for large groups and multiplicative imbalance for small groups, such as dyads and triads. In any case, we have few, if any, empirical studies that compare different equilibrium models.

Finally, it may be pointed out that this research has concentrated on particular relationships between the group and its leadership under different conditions of equilibrium and disequilibrium. The entire issue of how, or even if, leadership can shift groups or members from disequilibrium to equilibrium or vice-versa remains a challenging problem area for future research.

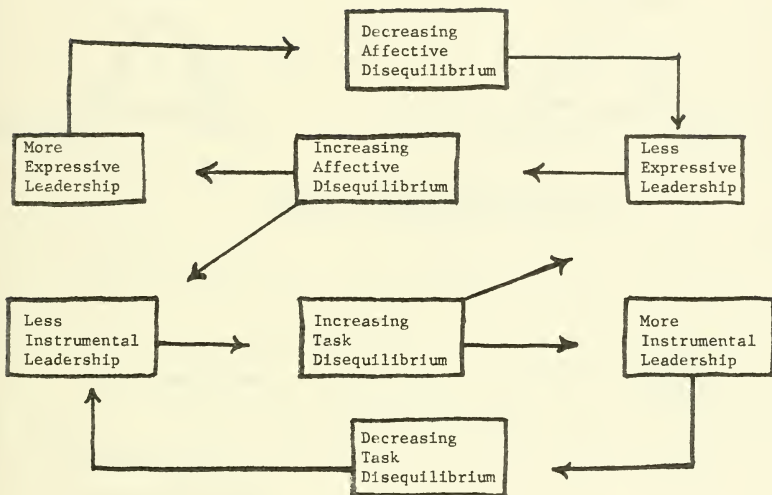


FIGURE 1: The Leadership Process Model



FIGURE 2: Disequilibrium Treatments

* * * * *

Experimental Task	Expected Duration in Minutes
1. Proofreading Task13
2. Cluster-Matching Task	7
3. Coding Ten Questionnaires From Batch Three9
4. Completion of Blank Questionnaire18
5. Cross-Checking Questionnaires From Batch Two	20
6. Coding Sixty Questionnaires From Batch Four including completion of post-experimental questionnaires	33

FIGURE 3: Experimental Procedures

		Affective Disequilibrium Treatments	
		Balanced	Unbalanced
<u>Leadership Treatments</u>	Expressive	u_1^*	u_2
	Instrumental	u_3	u_4

* Average values of performance for the subjects randomly assigned to the various treatment cells.

TABLE 1: Experimental Treatments

TABLE 2: Analysis of Variance for the Coding Task

	Balanced	Imbalanced	
	5.727*	13.000	9.364
<u>Expressive Leadership</u>	3.228	6.017	6.004
	N=11	N=11	
	11.400	6.222	8.947
<u>Instrumental Leadership</u>	3.921	2.489	4.183
	N=10	N=9	
	8.429	9.950	9.171
	4.534	5.799	5.181

a. Mean Number of Coding Errors

<u>Source</u>	<u>SS</u>	<u>DF</u>	<u>MS</u>	<u>F</u>	<u>P</u> (less than)
Within Cells	654.137	37	17.679		
Leadership Treatment	1.767	1	1.767	0.0100	0.754
Balance Treatment	23.390	1	23.390	1.323	0.257
Leadership X Balance	394.512	1	394.512	22.315	0.001

b. Analysis of Variance Table

* In each cell, the top number is the mean number of coding errors with the standard deviation underneath.

TABLE 3: Analysis of Variance for the Cross-Checking Task

	Balanced	Imbalanced	
<u>Expressive Leadership</u>	16.000*	13.909	14.850
	3.808	4.437	4.196
	N=9	N=11	
<u>Instrumental Leadership</u>	14.111	14.889	14.500
	3.926	3.756	3.451
	N=9	N=9	
	15.056	14.350	14.684
	3.589	4.069	3.814

a. Mean Number of Detected Errors

<u>Source</u>	<u>SS</u>	<u>DF</u>	<u>MS</u>	<u>F</u>	<u>P (less than)</u>
Within Cells	512.687	34	15.079		
Leadership Treatment	1.160	1	1.160	0.077	0.783
Balance Treatment	4.965	1	4.965	0.329	0.570
Leadership X Balance	19.398	1	19.398	0.286	0.265

b. Analysis of Variance Table

* In each cell, the top number is the mean number of errors detected with the standard deviation underneath.

FOOTNOTES

1. For a discussion of the measures of the degrees of balance, see Harary and Cartwright (1965) and Taylor (1970).
2. The underlying principle of balance is that the equilibrium state of a system of interrelationships is one of consistency which is sound Gestalt psychology. During the past decade, several other consistency theories have been developed. Festinger's cognitive dissonance (1957), Osgood and Tannenbaum's congruity principle (1955), and Newcomb's strain towards symmetry (1959) are all behavioral theories that rely on the supposition that consistency in relations is the preferred and stable state. The advantage of using the balance model is that it can define the "degree" of balance or imbalance for a large group as an interdependent system, while other consistency theories primarily focus on individual cognitions.
3. Because of time and financial constraints, only conditions of affective disequilibrium are investigated in the forthcoming experiment. Certainly, experiments involving task disequilibrium treatments are also necessary and important.
4. Thus, all of the replications in all four treatments had the same two confederates participating in the triads. Only the third group member was an experimental subject. The criterion measures, therefore, were computed only from the performances of these individual subjects. An additional advantage of having allowed the group memberships to vary only in the third individual is that it permitted more exact replications within and between the various experimental conditions.
5. It is important to recognize that this experiment was not designed to test balance theory or to test between the different formulations of imbalance. To the author's knowledge, all of the proposed concepts would agree that the imbalanced triad used in this experiment does represent a condition of disequilibrium.

Footnotes (continued)

6. The number of hours was included in the ad in order not to deceive students who were looking for more continuous part-time work.
7. She also responded to any questions that arose concerning the job, e.g., "Is the coding being done on campus?" or "Is any previous experience necessary?". The few students that asked if they could work more than a few hours were told that it was being limited because experience had shown that the coding efficiency starts to deteriorate after only a couple of hours.
8. There were several indications that the experimental situation had been concealed. Some of the subjects wanted to know if they could return to do more coding when additional questionnaires arrived. Others inquired where they could obtain the final results of the survey. During the debriefing session, most of the subjects were astonished that they had participated in an experiment and that all of the questionnaires, conversations, and project activities were fictitious. Many subjects confessed that they had been "on guard" for an experiment but that after all of the activity in the first fifteen minutes, they dropped the idea. Only two subjects claimed they knew it was an experiment all along but neither of them had any idea of the treatment or concepts involved. Many subjects did state that they knew something was going on when they had to complete the post-experimental questionnaire but they were not sure what it was. Finally, there were a few subjects who wanted to know who the "experimental subjects" were!
9. One of these subjects actually checked the confederate as very friendly. During the debriefing, he explained that even though the confederate was hostile, he perceived him as being very friendly because it was the first time anybody was willing to listen to him.
10. This is similar to the reaction reported by Weick (1964) in his experiment on the reduction of cognitive dissonance through task enhancement.

Footnotes (continued)

11. Perhaps, it is this interaction between leadership and disequilibrium that also explains why cohesive groups do not necessarily outperform non-cohesive groups.

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APPENDIX

This is part of a national survey designed to investigate the issues and problems of crime. For each of the following statements, please put a check in the most appropriate column for you.

<u>STATEMENTS</u>	strongly agree			strongly disagree	
	1	2	3	4	5
1. The smoking of marijuana should be legalized.					✓
2. Harsher jail sentences would serve as a deterrent to criminals and help reduce the crime rate.				✓	
3. It is better to let 5 criminals go free than to convict 1 innocent person.				✓	
4. Criminals have too many privileges in prisons such as T.V., movies, etc.				✓	
5. Extensive use of wire-tapping should be allowed to help fight organized crime.		✓			
6. Conviction only by a unanimous jury decision is unnecessary - only a two-thirds majority should really be needed.	✓				
7. Most judges are too lenient on criminals.		✓			
8. Police should be better educated - perhaps limited only to college graduates.				✓	

<u>STATEMENTS</u>	strongly agree			strongly disagree	
	1	2	3	4	5
9. Money needed for drugs is the primary reason for the sharp increase in the crime rate.		✓			
10. The violence on T.V. and in the movies has substantially contributed to the growth of crime.			✓		
11. Capital punishment should be totally abolished.					✓
12. Very strict gun legislation is needed immediately.			✓		
13. All criminals are sick to some degree and deserve psychiatric care.				✓	
14. Government centers should distribute drugs at a reasonable cost to those that are addicted.					✓
15. Lawyers are responsible for the release of too many dangerous criminals.		✓			

<u>Sex</u>	<u>Age</u>	<u>Marital Status</u>
✓ Male	— 18 or under	— Single
— Female	— 19 to 29	✓ Married
	✓ 30 to 44	— Divorced/Separated
	— 45 to 59	
	— 60 or greater	

